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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,172	04/01/2004	Henry Allen Hill	114096.131 US2 ZI-51	7892
23483	7590	08/09/2005	EXAMINER	
WILMER CUTLER PICKERING HALE AND DORR LLP			ANDERSON, DENISE BROWN	
60 STATE STREET			ART UNIT	PAPER NUMBER
BOSTON, MA 02109			2877	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,172	<b>Applicant(s)</b> HILL, HENRY ALLEN	
	<b>Examiner</b> Denise B. Anderson	<b>Art Unit</b> 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 8-19, 21-32, 34-36 and 40-42 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 7, 20, 33 and 37-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/1/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/25/05</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Ex Parte Quayle***

This application is in condition for allowance except for the following formal matters:

Prosecution on the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire TWO MONTHS from the mailing date of this letter.

***Abstract***

The abstract of the disclosure is objected to because the length of the abstract exceeds the required 150-word limit set according to rule 37 CFR 1.72 (a) & (b). Correction is required. See MPEP § 608.01(b).

***Claim Objections***

Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The applicant claims the regions are of equal area, which is the same as saying that the first region of the aperture occupies one-half of the area of the aperture. Examiner suggests either deleting this claim or making the claim dependent upon claim 2 instead of claim 5.

Claim 20 is objected to because of the following informalities: in line 15 the phrase "the aperture" should read "the first aperture" and in line 21, the phrase "the

aperture" should read "the second aperture" to avoid confusing between the first and second apertures. Appropriate correction is required.

Claims 33, 37 and 38 are objected to because of the following informalities: there is no antecedent basis for the words "detector-side mask". Examiner suggests the following correction: In claim 33, after the word "wherein" insert the words "the source assembly includes a detector side mask, wherein". Appropriate correction is required.

Claim 38 is objected to because of the following informalities: in line 4, there is no antecedent basis for the word "substrate". Examiner suggests the following correction: change the word "substrate" to "object". Appropriate correction is required.

Claim 39 is objected to because of the following informalities: in line 16, the phrase "return second return" is confusing". Examiner suggests deleting the first occurrence of the word "return". Appropriate correction is required.

***Allowable Subject Matter***

Claims 1-6, 8-19, 21-32, 34-36, and 40-42 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 1 is allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious multiple-region apertures and phase shifters in the source and object imaging paths in combination with the rest of the limitations of claim. Claims 2 – 6 and 8 – 19 are allowed because they depend on an allowed independent claim (1). Claim 39 is allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious shifting both 1<sup>st</sup> and 2<sup>nd</sup> return

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measurement beams in phase and combining such beams in combination with the rest of the limitations of claim. Claims 40-42 are allowed because they depend on an allowed independent claim (39). Claims 7, 20, 33 and 37-39 are objected to as described above, but would be allowed if the examiner's suggested corrections are made. Claims 21-32 and 34-36 would be allowed if appropriate correction is made to the independent claim from which they depend (claim 20).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hill (US Patent No. 6,445,453) discloses scanning interferometric near-field confocal microscopy which includes phase shifter and aperture, but not in the order and purpose as disclosed in the currently examined application.

Hill (US Patent No. 6,667,809) discloses scanning interferometric near-field confocal microscopy with background amplitude reduction and compensation, which includes phase shifter and aperture, but not in the order and purpose as disclosed in the currently examined application.

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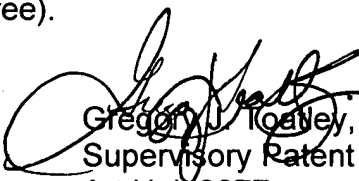
***Fax/Telephone Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise B. Anderson whose telephone number is 571-272-8324. The examiner can normally be reached on Mon-Fri (9:30 AM - 6 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Denise B Anderson, PhD  
Examiner  
Art Unit 2877

  
Gregory J. Toatley, Jr.  
Supervisory Patent Examiner  
Art Unit 2877

5 Aug 05

  
DBA